BUILDING SCHOOL READINESS THROUGH HOME VISITATION

Appendix A.
Building School Readiness Through Home Visitation: Detailed Research Findings

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APPENDIX A
BUILDING SCHOOL READINESS THROUGH HOME VISITATION: DETAILED RESEARCH FINDINGS

CONTENTS

I. INTRODUCTION

This Appendix is the detailed literature review that forms the basis for the findings that are summarized in the main paper. Appendix A addresses questions often posed about home visiting – questions such as, do home visiting programs help produce "ready children," "ready families and communities," and "ready schools?" Which families benefit most? How should home visiting programs be structured to maximize effectiveness? What can be done to promote the quality of program services?

Appendix A begins with background information on the major home visiting programs and the rationale for their use to promote school readiness, and then summarizes research findings in three main areas:

- School readiness outcomes when home visiting is the main program strategy;
- School readiness outcomes when home visiting is coupled with other service strategies; and
- Program quality.

II. HOME VISITATION SERVICES AND THE RATIONALE FOR THEIR USE TO PROMOTE SCHOOL READINESS

Home visiting is the name given to many service programs that share a single strategy: sending individuals into the homes of families or individuals to deliver services. Home visiting programs can serve the young as well as the elderly, and children with special needs and those without. They can provide a single visit to new mothers discharged early from the hospital, as well as multiple visits over several years to promote long-term change in families. And, they can provide primary prevention to broad groups of families as well as treatment for specific families with identified problems.

In this paper, however, the focus is on a subset of home visiting programs – those that send individuals into the homes of families with young children and seek to improve the lives of the children by encouraging change in the attitudes, knowledge, and/or behaviors of the parents. These are primary prevention programs, beginning prenatally or soon after birth, and continuing for as long as the first 3 or 5 years of the child's life. These programs include nationally known models such as Early Head Start, Healthy

Families America (HFA), Home Instruction for Parents of Preschool Youngsters (HIPPY), the Nurse-Family Partnership (NFP), Parents as Teachers (PAT), and the Parent-Child Home Program (PCHP). Together, these programs have thousands of sites across the nation, and each is in use in California.

These national models are the home visiting programs whose goals are most closely aligned with the school readiness focus of the First 5 California. They typically seek to:

- Promote enhanced parent knowledge, attitudes, or behavior related to childrearing;
- Promote children's health;
- Promote children's early learning and development;
- Prevent child abuse and neglect; and/or
- Enhance mothers' lives (e.g., decrease stress, provide social support, decrease rates of subsequent births and tenure on welfare rolls, and increase employment and education).

These goals are closely linked to the definition of school readiness adopted by the First 5 California Children and Families Commission. In other words, if home visiting programs are successful in achieving their goals, children will be much better prepared for school and for life.

III. WHAT DO HOME VISITATION PROGRAMS HAVE IN COMMON? HOW DO THEY DIFFER?

Home visiting programs differ, but they also share some common elements. The most important among these is that the success of home visiting depends upon the relationship between home visitor and parent. The ways in which programs are structured and delivered are important influences on that relationship.

A. Common Characteristics in Home Visiting Programs

The success of home visiting depends upon the relationship between home visitor and parent.

Most home visiting programs seek to create change by providing parents with (1) social support; (2) practical assistance, often in the form of case management that links families with other community services; and (3) education about parenting or child development.[1] The social support and practical assistance help to engage families and to build a relationship of trust between home visitor and parent. A strong relationship, in turn, can help reassure parents as they undertake the difficult work of acting upon the information and education provided by the program. Some researchers and practitioners also believe that, for some parents, creating a trusting relationship between home visitor and parent can be a first

step in developing the parent's ability to form and sustain secure relationships with others, including with her own children.[2,3] If the home visitor-parent relationship is weak, then benefits for parents or children are much less likely. Many of the ways in which programs differ influence the capacity of the program to establish that home visitor-parent relationship.

B. Differences Among Home Visiting Programs

Home visiting programs differ in their specific goals; in the level of the services they offer; in their staffing; and in whom they serve. Table 1 compares some of the largest national models of home visiting on these key dimensions. Appendix C provides more detailed information about each model, including its presence in California.

1. *Goals*

Most of the large home visiting program models focus on improving parenting skills to promote healthy child development and to prevent child abuse and neglect. Some explicitly seek to improve the lives of parents by encouraging mothers to return to school, find a job, or defer subsequent pregnancies.

2. *Intensity of Services*

Programs also differ in the onset, duration, and intensity of their services. Some programs begin during pregnancy, while others begin at birth or later. Programs are slated to last from two to five years, and visits are scheduled from weekly to monthly. If visits are limited or too infrequent, it may be difficult to establish a close home visitor-parent relationship.

3. *Staffing*

The experience and training requirements for home visitors also vary. Some programs primarily employ paraprofessionals, typically individuals from the community being served. These visitors generally have little formal education or training beyond that provided by the program, but, because their backgrounds are similar to the backgrounds of the parents, they may be able to more easily form a rapport with the parents. Others employ a variety of home visitors, including some paraprofessionals and others who have bachelors and masters' degrees. Some require particular types of professionals, such as nurses.

4. *Whom They Serve*

Programs also vary in terms of the populations that they serve. Some programs screen a wide number of families at the birth of a child but enroll only those families identified as highly stressed or at-risk for potential child abuse; others seek to enroll all or most of the families who live in the geographic catchment area for the program.

TABLE 1. DESCRIPTIONS OF KEY NATIONAL HOME VISITING PROGRAM MODELS (as of February 2002)

	Program Goals	Onset, Duration, and Frequency of Home Visits	Population Served	Background of Home Visitors	Training Requirements for Home Visitors
Early Head Start 664 sites nationally 53 sites in California	• Promote healthy prenatal outcomes for pregnant women • Enhance the development of very young children • Promote healthy family functioning	For home-based Early Head Start model only: Birth through age 3 Weekly home visits	Low-income pregnant women and families with infants and toddlers; 10% of children may be from families with higher incomes; 10% of program spaces reserved for children with disabilities	No specific requirements, although infant and toddler backgrounds preferred	Vary by program. Staff development plans and ongoing professional development required.
Healthy Families America 450 sites nationally 2 sites in California	• Promote positive parenting • Prevent child abuse and neglect.	Birth through 5th birthday Weekly, fading to quarterly	Parents in the mainland U.S. and Canada, all income levels and ethnicities, who are identified at the time of birth as at-risk for abuse and neglect	Paraprofessionals and Bachelor degrees	One week of pre-service training; 1 day of continuing training quarterly; 80 hours of additional training in the first 6 months of service are recommended by Prevent Child Abuse America.
The Home Instruction Program for Preschool Youngsters (HIPPY) 160 sites nationally 11 sites in California	• Empower parents as primary educators of their children • Foster parent involvement in school and community life • Maximize children's chances for successful early school experiences	Academic year, or two years before, and through the end of kindergarten Bi-weekly, i.e., at least 15 times, over 30 weeks during the school year	Families in the United States and Guam; all ethnicities; many low-income and with limited formal education.	Paraprofessionals, typically members of the community and former HIPPY parents. Most work part-time (20-25 hours/week)	Two-day pre-service training in the HIPPY program model, plus weekly ongoing training and staff development.

	Program goals	Onset and duration	Population served	Background of home visitors	Training requirements for home visitors
The Nurse-Family Partnership 250 sites nationally 11 sites in California (1 to open Fall 2002)	• Improve pregnancy outcomes • Improve child health and development • Improve families' economic self-sufficiency	Prenatal through 2nd birthday Weekly, fading to monthly	Low-income, first time mothers, all ethnicities	Public health nurses	Two weeks of training in the program model over the first year of service. Forty-six hours of continuing education in assessing parent-infant interaction, plus additional continuing education as needed.
The Parent-Child Home Program 132 sites nationally 4 sites in California (1 to open Fall 2002)	• Develop children's language and literacy skills • Empower parents to be their children's first and most important teachers • Prepare children to enter school ready to learn • Enhance parenting skills • Prepare children for long-term academic success and parents to be their children's lifelong academic advocates	Typically 2nd through 4th birthdays, but as young as 16 months (two years total) Two visits/week	Families in the United States, Canada, Bermuda, and the Netherlands; low-income, low-education families; all ethnicities; families with English as a Second Language; teen parents; homeless families	Paid paraprofessionals from the community, many previously parents in the program. Small number of volunteers, who may be professional.	16 hours of training prior to becoming a home visitor. Weekly minimum two-hour ongoing training and supervision session.
Parents As Teachers 2,879 sites nationally 88 sites in California	• Empower parents to give their child the best possible start in life • Give children a solid foundation for school success • Prevent and reduce child abuse • Increase parents' feelings of competence and confidence; • Develop home-school-community partnerships on behalf of children	Prenatal through 3rd birthday; may extend through 5th birthday Monthly, biweekly, or weekly, depending upon family needs and funding levels	Families in the United States and six other countries, all income levels and ethnicities.	Paraprofessionals, and AA, Bachelor, and advanced degrees	One week of pre-service training, 10-20 hours of in-service training, annual credentialing by the Parents As Teachers National Center

NOTE: As of January 2003, Parents as Teachers had 109 sites in California and Early Head Start had 51.
SOURCE: National program offices and the websites for each home visiting model. See Appendix C for additional details, including contact information.

IV. DO HOME VISITATION PROGRAMS BUILD SCHOOL READINESS?

Results vary widely across program goals, program models, different sites implementing the same model, and different families within a single site. A recent meta-analysis by Abt Associates of family support programs evaluated since 1965, most of which relied on home visiting as an intervention strategy, found that over half of the studies reported very small or no effects.[4]

But, the popularity of home visiting has been driven by a few studies in which effects were much larger. The following sections therefore describe both the "best cases" – those studies which have captured the attention of policymakers and practitioners with large results – as well as the more typical findings.

Findings are presented below, grouped into the three major areas of school readiness identified by the First 5 California Children and Families Commission: (1) Ready Families and Communities; (2) Ready Children; and (3) Ready Schools. Generally, results suggest that programs are more likely to produce benefits in outcomes related to families (i.e., in aspects of parenting and, perhaps, prevention of child abuse and neglect), than in outcomes related to children (i.e., children's health or development).

The studies that form the basis of this review are evaluations of programs in which home visiting has been the primary service strategy. A subsequent section of this paper examines the effects of home visiting services when they are offered in conjunction with other services.

A. Ready Families and Communities

The First 5 California Children and Families Commission defines "Ready Families and Communities" as follows:

> Family and community supports and services that contribute to children's readiness for school success
>
> - Access to high-quality and developmentally appropriate early care and education experiences
> - Access by parents to training and support that allows parents to be their child's first teacher and promotes healthy functioning families
> - Prenatal care, nutrition, physical activity, and health care that children need to arrive at school with healthy minds and bodies and to maintain mental alertness[5]

The home visiting programs highlighted in this Appendix all seek to provide training and support for parents, and many also seek to promote good child health. Results of evaluations of these and similar home visiting programs suggest that many programs lead

to small increases in parents' knowledge of child development or improvements in parents' attitudes about parenting, and some are associated with changes in parent-child interaction or the prevention of child abuse and neglect. Changes in the home environment – either to make it safer or more likely to promote early literacy or child development – are more rare. When tested with rigorous methods, most home visiting programs have not increased the utilization of preventive health care or led to benefits in children's health status.

1. Parenting Knowledge, Attitudes, and Behavior

Many home visiting programs seek to change parents' knowledge of child development, their attitudes toward parenting, or their view of themselves as parents – all assumed to be necessary first steps toward enhancing the parent-child relationship, reducing rates of child abuse and neglect, and promoting children's health and development. Parents who have an accurate understanding of children's development will react with understanding and good humor rather than frustration or abuse if their young child cannot accomplish what an older child might. Parents who feel confident in their ability to be parents, who are less stressed, and who know a variety of ways to discipline their children will be warmer and more responsive to their children and less likely to resort to harsh discipline or physical violence. Children will develop better when there are more books and developmentally stimulating toys in the home and when parents talk with their children more and respond more quickly to them. Programs also often assume a cascading set of reactions: Once parents begin to respond with warmth and nurturance to their children, the children begin to respond differently to their parents. They may become more attached, and that new close bond can become so rewarding to parents that they will spend more time nurturing their children, which should continue to make the interactions between parent and child more beneficial for both. That close bond, and the hoped-for decreases in abuse and greater success in school, might all lead children later in life to avoid delinquent or other maladaptive behavior.

Many home visiting programs show consistent, though small, benefits in outcomes associated with parenting.

These benefits can be measured directly, by impartial observers of the mother-child relationship, and/or indirectly, by mothers' reports of their own behavior or attitudes. Several home visiting programs have demonstrated benefits on one or more of these measures. Indeed, many home visiting programs show consistent, though small, benefits in outcomes associated with parenting.

A recent review of several evaluations of the Healthy Families America (HFA) program, for example, concluded that the "most robust" effects of that program are found in areas related to parent-child interaction and parental capacity.[6] Interim results of a large national evaluation of the effects of Early Head Start services demonstrated improvements in a whole range of parenting knowledge, attitudes, and behaviors, including changes in parent-child interactions and in the literacy-supporting nature of the home. Similar to other home visiting programs, the effect size of EHS was less than .10-.15 of a standard deviation for most outcomes,[7] generally considered by social scientists

to be too small to be clinically significant.[8] (See Box 1 for a discussion of the definition and interpretation of effect sizes.) However, the Early Head Start researchers concluded that the fairly consistent pattern of effects suggests that services *are* having a meaningful impact on children and families – an impact that will lead to broader and larger effects on children in later years.

In several studies, differences on self-report scales designed to assess parental attitudes or behavior are found more often than are differences on measures of the home environment or observed mother-child interaction. For example, parents in Hawaii's Healthy Start program, which was the forerunner of the Healthy Families America program, reported experiencing less stress than members of the control group, less frequent use of harsh discipline, and a greater sense of efficacy as parents, but independent observers saw no notable differences in the mother-child relationship.[9]

The Abt Associates meta-analysis concludes that family support programs (which include both home visiting, center-based, and parent group approaches that have a parent education component) collectively yield benefits in parenting attitudes, knowledge, and behavior of about .18-.25 of a standard deviation, but the largest effects are generated by programs that use parent support groups rather than home visiting services.[4] In addition, the Abt researchers suggest that the largest effects on parent behavior are seen in those programs that focus on families where children are already identified with behavior problems, rather than those programs that seek to promote good child rearing practices for a general population. They judge the effects for family support programs so small that, "It is not clear whether a difference of this size represents a change that is large enough to have the effect on children's well-being that it is ultimately intended to bring about."[10]

University of California at San Diego researchers conducted another meta-analysis, this one focusing on just the subset of studies in the Abt database that employed home visiting. They too concluded that home visiting produces small benefits in parenting attitudes (.10 of a standard deviation) and parenting behavior (.09 of a standard deviation)[11] – in other words, about what was observed in the Early Head Start study.

In sum, the results suggest that home visiting programs may produce changes in the precursor parenting attitudes, and sometimes the parenting behaviors, that are related to prevention of abuse and neglect and promotion of healthy child development and school readiness. Effect sizes of less than .20 of a standard deviation appear to be the norm, and families that seek out services because they are trying to address an identified problem may benefit most.

Box 1.
Statistical Significance and Effect Sizes:
When is a Result Large Enough to Be Important?

In good program evaluations, researchers compare families that received a service such as home visiting with families that did not, and then use statistical tests to assess whether the results are truly due to the intervention (e.g., home visiting) and not just to chance. If the difference between the two groups exceeds agreed-upon standards, then the results are called "**statistically significant**," and deemed likely to be obtained again if the study were repeated. Sometimes, very small differences between groups (e.g., one or two points on a standardized test) can be statistically significant, even though such differences may not have any practical or functional importance for the families.

To assess if a difference is large enough to be important in a real-world sense, researchers calculate an "**effect size**," which translates the difference between two groups into standardized units. Rules-of-thumb, used in the field of human services for many years, define effect sizes up to .20 as small, .50 as moderate, and .80 as large, measured in standard deviation units.

Home visiting programs typically produce effect sizes that would be judged under these rules to be too small to be meaningful. But, even small effects sometimes can be important. The effect size of aspirin in reducing heart attacks is only .03, but many physicians recommend that their patients take aspirin daily. The effect size of psychotherapy is about .32, but many people regularly see psychologists and psychiatrists (McCartney & Dearing, 2002).

Examples like these suggest that even a small change can be important if:

- it can be produced across a whole population,
- it is closely connected with a very significant event or outcome, and
- the intervention is relatively inexpensive to deliver.

This is the case for aspirin and heart attacks: an aspirin-a-day is a very inexpensive intervention, and the benefits that can be achieved if all adults participated would be enormous in terms of health, happiness, and reduced costs for the country.

If, on the other hand, a relatively expensive program produces only a small effect size on a paper-and-pencil test that does not predict actual behavior of parents or children, then the program may not be worth replicating. In other words, it is more important that home visiting programs produce even small benefits on actual changes in parenting behavior, child abuse and neglect, or children's school performance, than that they produce benefits on paper-and-pencil tests that may not predict real outcomes for children and parents.

Implications for Program Planners:

- Ask program evaluators to calculate effect sizes in addition to tests of statistical significance.
- If evaluations use paper-and-pencil measures, make sure the measures actually predict behavior change in children or parents.
- Try to include assessments of real behavior in addition to any paper-and-pencil measures.

For further information about effect sizes:

McCartney, K., & Dearing, E. (Winter 2002). Evaluating effect sizes in the policy arena. *Evaluation Exchange, 7(*1). Cambridge, MA: Harvard Family Research Project.

McCartney, K., & Rosenthal, R. (2000). Effect size, practical importance, and social policy for children. *Child Development*, *71*(1), 173-180.

2. Child Health and Safety

Many home visiting programs seek to ensure children's good health by promoting the utilization of preventive health services such as prenatal care, immunizations, or well-baby check-ups. Some programs use parent education to teach parents the value of preventive health services; others may provide medical care directly. Home visitors may also focus on safety issues, including both the removal of safety hazards in the home and the prevention of child maltreatment. Improved birth outcomes and good child health are important both in their own right, and also because good health is an essential building block for children's general development. Elimination of child abuse and neglect is important for children's physical and emotional health.

Generally, results suggest that home visiting programs are not associated with increases in utilization of preventive health care services or in broad measures of child health status, but they can prevent injuries and, perhaps, child abuse and neglect.

a. Nutrition: Breastfeeding and Diet

Good health for children is heavily influenced by good nutrition, and many home visiting programs seek to encourage breastfeeding and healthy diets. Breastfeeding, in particular, can help protect children from early infections which can hamper their development. At the Memphis, Tennessee, site of the Nurse-Family Partnership, for example, mothers who had been visited by a nurse home visitor were more likely to attempt breastfeeding than their control group counterparts (26% versus 16%), although the groups did not differ in duration of breastfeeding.[12]

Few studies have actually assessed the effects of home visiting on these outcomes, however, and a 2000 meta-analysis of international literature suggests that, while there may be a small positive effect on breastfeeding, there are too few studies to draw conclusions about the effects of home visiting on children's diets.[13]

b. Preventive Health Services and a Medical Home

Many home visiting programs seek to educate parents about the benefits of preventive health services such as prenatal care, well-baby check-ups, dental care, or immunizations, and to link families with a "medical home" so that children can see the same doctor on an ongoing basis. Such continuity of care is a hallmark of high quality health services. It should lead to decreases in expensive and avoidable visits to emergency rooms, and to more appropriate medical care, including more timely immunizations and well-baby care.

Several HFA program sites report that up to 98% of enrolled families have medical homes, and that large percentages of children (e.g., 97% in three sites in Florida and eight sites in Tennessee) have received immunizations by age 2.[6] However, in most randomized trials, when home visited-children are compared against a control group, the groups make about the same use of preventive health services. The Nurse-Family Partnership, for example, did not find increased utilization of prenatal care.[12] Through the first year of operation, a careful evaluation of Hawaii's Healthy Start, the forerunner of

HFA, demonstrated that more home-visited than control group families had a regular medical provider, but there were no differences in rates of immunization or well-child visits.[9]

Several meta-analyses and literature reviews have also concluded that home visiting programs do not lead to increased use of preventive health services either before or after birth.[13-16]

Home visiting programs are not associated with increases in utilization of preventive health services

c. Child Health Status

Given that home visiting programs only sporadically generate the precursor behaviors associated with improved child health (e.g., increased utilization of preventive services, better diet), it is unlikely that home visiting services will consistently lead to improved children's health status – and that is the case. Whether children's health status is measured in terms of birth outcomes, mothers' reports of their children's health, or children's actual height and weight, few benefits are found.

(1) Birth Outcomes: Preterm Birth and Low Birth Weight

Preventing preterm birth and low birthweight is very difficult, no matter the service strategy employed.[17] Many home visiting programs only enroll children after birth, which means that no effects on birth outcomes is possible. Among programs that enroll pregnant women, the NFP demonstrated fairly large decreases in preterm births and decreased percentages of low birth weight births, but only for very young teens and smokers in the program's first site in Elmira, New York.[12] These findings were not replicated in the program's second study site in Memphis, Tennessee.[12]

The explanation may lie in the initial rates of cigarette smoking in the two sites: while 55% of mothers smoked at enrollment in Elmira, only 9% in Memphis did. To the extent that benefits were derived because the program led to decreases in smoking, these differences in initial smoking rates could have meant that it was not possible to achieve similar effects in Memphis: not enough mothers had the problem behavior that the home visiting program was seeking to alter.[12]

(2) Child Health Status and Physical Growth

Other studies have assessed the effects of home visiting on children's general health status, as reported by their mothers, or on the children's physical growth (height and weight). The Abt Associates meta-analysis of family support programs reports an average effect size of .09 - .12 on these domains, and concludes that family support programs have no meaningful effects on children's physical health and development.[4]

d. Child Safety: Unintentional Injuries and Child Maltreatment

Home visiting programs seek to promote child safety in several ways. A home visitor might help parents to childproof their homes to eliminate household hazards through simple education, by providing vouchers to cover the cost of simple childproofing, or by distributing safety items such as covers for the electrical outlets. Home visitors can also teach parents the importance of safety practices outside the home, such as the use of car

seats. In addition, many programs have a special focus on the prevention of child abuse and neglect. Home visiting is hypothesized to help decrease parental stress and to help parents learn new childrearing and disciplinary techniques, all of which should lead to better parent-child interactions and decreases in abuse and neglect. In other words, if effective, home visiting will help deliver children to school physically safe and psychologically sound.

Generally, meta-analyses suggest that home visiting can help decrease injuries and child maltreatment, depending upon how these concepts are measured.

Home visiting can help decrease injuries and child maltreatment, depending upon how these concepts are measured.

(1) Home Safety Hazards

Although most large studies (e.g., Early Head Start) have not found home visiting effective in helping parents identify and fix home health hazards, a few, scattered studies have. The key may be the complexity of the item that needs to be fixed; the hazards that are the easiest and least expensive to fix are the most likely to improve as a result of home visiting.[13,18]

(2) Unintentional Injuries

Unintentional injuries can be the consequences of safety hazards at home or the disguised results of child maltreatment. Evaluators have treated them as both, and have sometimes used rates of hospitalizations for injuries or ingestions as proxies for measures of child abuse and neglect. For example, in the Nurse-Family Partnership, during the first two years of their lives, children in the home visiting group had fewer hospital visits for any cause or for injuries in Elmira, New York, and fewer health encounters for injuries and ingestions in Memphis. These effects were concentrated among those families with the fewest coping abilities initially.[12] Based on these and other studies, some meta-analyses suggest that home visiting may lower the incidence of such injuries.[13,19]

(3) Child Abuse and Neglect

Although prevention of child abuse and neglect is the primary goal for many home visiting programs, accurately measuring rates of child maltreatment is very difficult. First, abuse is a relatively rare event in the population, and most studies cannot afford to track the number of families necessary to detect its presence. Second, the most direct measure of child maltreatment, reports to Children's Protective Services (CPS), may over- or under-estimate the true rates of abuse and neglect.[20] Evaluators therefore have assessed child maltreatment using a variety of measures, including both initial and substantiated CPS reports, changes in parents' views of parenting or disciplinary practices, and rates of hospitalization or emergency room visits due to injuries and ingestions of poisonous substances, which may be proxies for physical abuse or neglect, as mentioned above.

(a) *Rates of Abuse and Neglect*. Some of the strongest evidence for the potential of home visiting to prevent child abuse and neglect comes from the Elmira, New York, study of the NFP. In that study of home visiting by nurses, a long-term

follow-up of families indicated that participating families had about half as many substantiated reports over the course of the first 15 years of their children's lives than did families in the control group (an average of .29 versus .54 incidents per program participant). This is a large and important difference. The families that benefited most were those in which mothers felt the least sense of control over their lives at enrollment.[21]

Similarly, fewer child abuse and neglect cases were opened in a Southern California PAT program for teens among the group that received both PAT home visiting and comprehensive case management services, although the group that only received PAT home visiting services did not benefit.[22] Randomized trials of Hawaii Healthy Start and Healthy Families America, including a study of an HFA program in San Diego, California, have not yielded positive[6,9,23] results. (See Appendix B for a description of the San Diego study.)

(b) Other Measures of Child Maltreatment. Because assessing actual abuse and neglect rates is difficult, other proxy measures have been used, and these tend to show some benefits from home visitation programs. For example, the NFP program, as mentioned above, showed decreased rates of hospitalizations for injuries or ingestions.[12] Other programs (HFA, Hawaii Healthy Start, and NFP) have generated differences in maternal attitudes related to abuse and neglect, in mothers' self-reported use of harsh discipline, or in mothers' scores on scales associated with risk for abuse and neglect.[14] Mothers in the Hawaii Healthy Start program also reported less maternal injury due to violence in the home (e.g., from a spouse or boyfriend),[9] which is often correlated with child abuse.[24]

(c) Deciphering the Mixed Evidence Concerning Child Abuse and Neglect. On the strength of these and other studies, groups such as the National Academy of Sciences and the Canadian Taskforce on Preventive Health Care have recommended home visiting as a means to prevent child abuse and neglect, especially when nurses are used to visit first-time or teen mothers (as in the NFP).[25,26] One meta-analysis of this field suggests that home visiting programs create relatively large effects (.48 of a standard deviation) on prevention of child abuse and neglect,[11] but most other recent meta-analyses have judged the evidence too conflicting to reach solid conclusions,[13,19] or the benefits too small to be meaningful.[4]

It is clear that some home visiting programs have prevented child abuse and neglect, but what accounts for the wide variation in results and the many programs that do not yield benefits? The varied findings may be due both to characteristics of the families and to the services the programs offer.

With respect to families, for example, early results from the Nurse-Family Partnership suggested that the families that benefited most were those in which mothers had low coping skills initially. Subsequent analyses revealed that home visiting services did not prevent child abuse among those families that experienced a great number of domestic violence episodes (about 21% of the families in the Elmira nurse-visited group),[21] and that nurse-visited and control group families experienced similar rates of

abuse and neglect until there were three or more children in the family. It was only when families had three or more children that the rates of child abuse among home-visited and control group families diverged.[27] These NFP results suggest that benefits will be greater for families with fewer coping skills initially and with fewer episodes of domestic violence, and that the results may not be seen for a few years, until families grow in size and parents face the challenges posed by rearing more than three children. This may mean that long-term follow-up is needed to detect changes in child abuse and neglect.

In addition, the Abt Associates' meta-analysis suggests that program structure and services may play important roles. Although they concluded that family support programs as a whole had almost no effect on child safety outcomes, the Abt researchers teased out aspects of services that were associated with larger effects: Greater child safety benefits were linked with those family support programs that served families with children under the age of 3 years, that provided case management services, that provided parent-child activities, and that worked with teenage parents (as a large percentage of the Elmira NFP families were). Effect sizes for these types of programs range from .56 to 1.21 of a standard deviation, and programs with all three features (case management, parent-child activities, and a teenage parent population) have the largest average effects (1.40 of a standard deviation), compared with average effect size of .20 for programs with none of these service elements.[4] These are very large and important effects, and suggest that programs seeking to prevent both unintentional injuries and child maltreatment would do well to establish these service elements and focus on teen parents.

The strongest evidence for the benefits of home visiting programs lies in the domains of parenting behaviors, child safety, and the prevention of child abuse and neglect

Targeting services to the neediest or highest risk families (e.g., teens, women with low coping skills), however, can only provide benefits if program services and curricula are up to the task. In a meta-analysis that compared the effectiveness of programs that offered services universally or in a variety of more targeted approaches, the researchers conclude that using screening instruments to recruit families at very high risk for child maltreatment into services may unfortunately bring families into home visiting programs that are ill-equipped to serve them.[28] So, while these families may benefit the most, they can only benefit if they are in the right program, with services tailored to address their needs. (See Appendix E (FAQ7): Should We Target Services to Particular Groups or Offer Them Universally?)

In sum, the strongest evidence for the benefits of home visiting programs lies in the domains of parenting behaviors, child safety, and the prevention of child abuse and neglect, although the evidence concerning child maltreatment derives primarily from measures other than CPS reports. The 15-year follow-up in the NHVP suggests that both short- and long-term benefits may occur, but it and other studies suggest that program effects are dependent upon characteristics of the families they serve, their curricula, and the combination of services that they offer families.

3. Maternal Life Course

Some home visiting programs explicitly seek to help mothers improve their own lives. For example, programs may strive to provide social support so as to decrease maternal stress, relieve maternal depression, and improve mothers' mental health. Other programs seek to help mothers increase employment, complete their education, or defer subsequent births. Both sets of outcomes should benefit the children of these women, too.

Most studies have not yet shown benefits in increasing mothers' social support, their use of community resources, or their mental health.

If women are able to defer the birth of a second child, then they may be better able to leave welfare and find employment. They may be able to move out of poverty, and they may be better able to focus attention on their child, both of which are related to better outcomes for children.[12] Clinical depression can be a barrier to employment, and can also affect mothers' interactions with their children – both of which are likely to contribute to the higher rates of behavior, academic, and health problems seen among children of depressed mothers, so addressing maternal depression should benefit children both directly and indirectly.[29]

Results suggest that, with a few exceptions, most home visiting programs do not lead to large benefits for mothers in these domains.

a. Mothers' Stress, Social Support, and Mental Health

Some of the best evidence for effects in the area of mothers' psychological well-being comes from the UCLA Family Development Project, a small university-based program that employs clinically-trained home visitors to work closely with parents. Home visits are scheduled weekly during late pregnancy and in the first year, then biweekly in the second year, and then fading to phone and follow-up contacts only in the third and fourth years. Home visits are complemented by a weekly mother-infant group and referrals to other services. The program seeks to involve the father and other family members, and, in 87% of families, the father is often or sometimes involved in services. The program relies on the relationship between home visitor and mother to help the mother work through unresolved personal issues, including those related to her current relationships with the father, other family members, and her baby. This very clinically-focused approach has yielded results such as less depression and anxiety on the part of the mother, and more frequent and satisfying support from the partner and other family members. These changes were also associated with better parent-child interaction.[2,30]

For the most part, however, reviewers conclude that most studies have not yet shown benefits in terms of increasing mothers' social support,[6] their use of community resources (an aspect of social support),[7] or their mental health.[4]

b. Mothers' Self-Sufficiency

The best evidence for the potential of home visiting programs to help mothers improve their lives economically comes from the NFP. In the Elmira program site, for

example, over the course of 15 years after the birth of their children, poor unmarried women who had been home-visited had fewer subsequent pregnancies and births, were more likely to delay a second birth, spent fewer months on welfare or receiving food stamps, and had fewer problems due to substance abuse and fewer arrests than their counterparts in the control group. These were large differences: 60 versus 90 months on welfare, for example, and 65 versus 37 months between first and second births.[12] A 1998 RAND Corporation study indicated that these changes in maternal life course among high-risk mothers were primarily responsible for the program's $18,611 in net savings per family to government, and that the program did not produce benefits or cost savings when offered to a lower-risk population.[31]

The sentinel finding for maternal self-sufficiency appears to be a reduction in the rate of subsequent births, which the authors in the NFP believe led to positive changes for parents and children later in life. In Memphis, the second NFP site, subsequent pregnancies were also deferred, although not as much as they had been in Elmira (a 67% reduction in Elmira versus 23% in Memphis at the end of program services), and there were no differences in employment or receipt of AFDC.[12] Follow-up is continuing to determine whether increased benefits will be observed in Memphis over time as they were in Elmira.

In contrast, studies of other large programs have not found many benefits in maternal self-sufficiency. For example, the three-city Teenage Parent Home Visitor Services Demonstration project employed paraprofessionals to help teen mothers leave welfare and enter the workforce.[32] Although home-visited teens spent more time than their control group counterparts in education, they did not achieve any gains in educational degrees; they spent less time in job training; they were less likely to be employed; and they used equivalent amounts of AFDC, Food Stamps, and Medicaid benefits. The program succeeded in promoting greater use of passive contraception, but there were no differences in overall rates of pregnancy or repeat births during the relatively brief follow-up period. (See Appendix B.)

The best evidence for the potential of home visiting programs to help mothers improve their lives economically comes from the NFP.

Similarly, Early Head Start participants did not differ from the control group in their participation in self-sufficiency activities or employment rates in the first 15 months of services. EHS parents who received home visiting services were more likely than control group parents to take part in high school and ESL classes, and in vocational courses, but there were no differences in achievement of educational degrees or credentials, in employment, or in welfare receipt.[7]

One international meta-analysis suggests that home visiting programs have no effect on family size, public assistance, or employment, and too little is known about education to draw any conclusions.[13] The Abt Associates meta-analysis of US family support programs concludes that, with an effect size of .10 of a standard deviation, family support programs generally have "very little effect on parents' economic well-being."[33]

In sum, with the exception of the NFP, few programs have produced benefits in self-sufficiency aspects of mothers' lives.

B. Ready Children

The First 5 California Children and Families Commission has defined "ready children" as follows:[5]

Children's readiness for school:

- Physical well-being and motor development
- Social and emotional development
- Approaches to learning
- Language development
- Cognition and general knowledge

All of the home visiting programs examined in this paper seek to promote children's development. Most have assessed effects on cognitive or language development, but others have examined motor, social, and emotional development, and a few have measured children's behavior.

Results suggest that benefits in children's cognitive development accrue more often among families where there are clearly identified needs to be addressed (e.g., children with physical disabilities and developmental delays). Cognitive benefits are not demonstrated reliably in randomized trials of home visiting programs, although there is a suggestion that home visiting services may help promote early language skills. Social development effects are elusive, although one program found significant long-term benefits in children's behavior.

1. Child Development, Achievement, and Behavior

As described earlier, most home visiting programs seek to promote children's development and achievement by changing how parents interact with their children and by encouraging parents to make their homes more conducive to child development. A few focus more attention on child development goals (e.g., PCHP, HIPPY, and PAT), but they still primarily rely on parents to change their behavior between home visits so as to promote child development. The mixed effects of home visiting in producing changes in parenting and the home environment, health outcomes, and maternal self-sufficiency, suggest that results concerning children's development and behavior will be mixed as well, and they are. Key explanatory factors appear to be the risk status of the children and whether or not services are child-focused.

a. Children's Cognitive Development, Language Development, and Academic Achievement

Many home visiting studies have assessed children's development using standardized tests, and a few have examined children's school achievement. While there

are some positive findings, generally results are very mixed. Center-based, child-focused services or center-based, child-focused services combined with home visiting yield larger and more long-lasting benefits in cognitive development than do home visiting services alone.

Center-based, child-focused services or center-based services combined with home visiting yield larger and more long-lasting benefits in cognitive development than do home visiting services alone.

In this arena, the home visiting studies that have captured a great deal of attention include follow-up studies that compared graduates from three programs in which child development is a primary focus (HIPPY, PAT, and PCHP) with age-mates who did not receive that program's home visiting services. These studies suggest that home-visited children out-perform their peers well into their school years. For example, an assessment of the Arkansas HIPPY program compared children who had participated in HIPPY with two matched groups of third and sixth graders: those who had participated in preschool and those who had no formal school experience prior to entering kindergarten. HIPPY children were less likely to be suspended than children who had no preschool experience. Through the sixth grade, HIPPY children had higher grades and higher achievement test scores in reading and language arts than either group, and higher math grades and scores than the no preschool group. Teachers rated the HIPPY students as better adjusted than either group and their academic performance superior to that of the no preschool group. The groups did not differ on special education placements. The evaluator described the effect size as small in magnitude, but notes the consistent pattern of results.[34] PAT has found benefits for graduates through the fourth grade,[35] and a study of the Parent-Child Home Program suggested that children who had received services were more likely than their peers to have graduated from high school.[36]

More methodologically rigorous randomized trials, however, deliver more nuanced results. They suggest that only some children benefit, and that home visiting may not produce as large cognitive benefits as do center-based services. In another HIPPY evaluation, for example, children's cognitive development, school achievement, and classroom adaptation were assessed for two cohorts of children at each of two program sites and at two points in time. No clear pattern of results emerged: children in the first cohort benefited on some measures at one site but not at the other, or at one point in time but not at the other, and children in the second cohort did not benefit at either site.[37]

Three randomized trials of PAT also showed mixed results. In a Salinas Valley trial, children born to Latina mothers showed benefits on measures of cognitive, linguistic, and social development and self-help behavior.[22] In a Southern California trial, only children whose teen mothers received case management services (either alone or in combination with PAT home visiting services) showed benefits in development, and then only on measures of cognitive development.[22] Finally, in a national trial, only children at one of three inner-city urban sites showed benefits, and then only for social development.[38]

An evaluation of the NFP in Denver suggested that nurse home visiting promoted language development, but only among children whose mothers had low psychological resources (that is, low IQ, low coping skills, and poor mental health) at enrollment into the program.[39] (See Appendix B.)

In sum, home visiting produced child development benefits for some children, in some programs, at some program sites. Results from Early Head Start further suggest that home visiting may offer different benefits than other service strategies. In interim Early Head Start results, when children were two years of age, home visiting services produced a small effect on children's language development (effect size of .13 of a standard deviation), but no effects on cognitive development. Larger effects (.19-.28) were achieved on language development at mixed-approach program sites that offered either home visiting and/or center-based services to families, depending upon the needs of the families. Sites offering only center-based services generated effect sizes of .22 on cognitive development, but did not promote language development.[12] By age 3, however, only the mixed-approach sites produced significant effects in language development (effect size of about .23), and only center-based sites appeared to have any effect on cognitive development.[40] (See Appendix B.)

b. Deciphering the Mixed Evidence Concerning Cognitive Development

Most meta-analyses and literature reviews offer one clear conclusion: large benefits in children's cognitive development are most likely when services focus directly on the child, and not when they rely upon parents to intervene with the child, as most home visiting programs do. Even home visiting programs with more of a didactic child focus (e.g., HIPPY and PCHP) may not result in as much time spent directly with the child as does a center-based early childhood program. The Abt Associates meta-analysis compares the effect of home visiting and center-based early childhood education on cognitive development, and concludes that home visiting services generate an effect size for cognitive development of .26, but programs with early childhood education components generate effects almost twice as large (.48).[4]

Home visiting programs that serve low income populations generate cognitive benefits of about .09 of a standard deviation; but programs that serve only children with special needs produce benefits that are about four times larger.

These Abt analyses include home visiting programs that focus on families with children who have clear physical or developmental disabilities or biological risks (e.g., born low birth weight) as well as those that serve broader groups of children. Although home visiting programs for children with special needs were not addressed in this review, home visiting services appear to promote the development of these children more than for most other children.[4,13,16] The Abt researchers conducted additional analyses and conclude that home visiting services generate cognitive development benefits of moderate size (.36) when services are targeted to children with biological risks, but much smaller (.09) when they are not.[4]

Put another way, the Abt Associates meta-analysis suggests that home visiting programs that serve socially at-risk (e.g., low income) populations generate cognitive benefits of about .09 of a standard deviation; but programs that serve both biologically at-risk and non-at-risk children produce benefits that are about 3 times larger; and programs that serve only children with special needs produce benefits that are about 4 times larger.[4] But, none of these benefits on children's cognitive development were as large as the benefits gained via center-based or very child-focused services offered in conjunction with home visiting.

2. Social and Emotional Development, and Children's Behavior

Because, as described above, home visiting programs can produce small but positive benefits in the mother-child relationship, it is reasonable to expect that strong parent-child attachments may emerge among home-visited families. These attachments create a secure base from which children can explore the world with confidence and curiosity. Children with strong attachments to their parents are better able to take advantage of the opportunities that school offers, to develop better social skills and greater emotional stability, and to steer clear of later child behavior problems and delinquency.

At least one home visiting program has assessed children's long-term behavior, and finds very important benefits. Families who had participated in the Elmira, New York NFP were contacted when the children were 15 years of age, some 13 years after program services ended. Teens who had been born to poor unmarried women who had been home-visited showed significant benefits over the control group in several areas: there were fewer instances of running away, arrests, convictions, cigarettes smoked per day, and days having consumed alcohol in the last six months, less lifetime promiscuity, and parents reported their children had fewer problems related to drug or alcohol use.[12]

The Abt Associates meta-analysis concludes that while family support programs can improve children's social and emotional development (effect size of .22-.26), the programs which have the largest effects on social and emotional development do not rely on home visiting or work with primarily low-income families, but instead target children with developmental risks and/or behavioral problems, have as a goal the development of parent competencies, and tend to use professional staff to work with parents.[4] These are more likely to be programs in which parents have sought help to address a particular existing problem rather than primary prevention programs, and are therefore not the types of programs reflected by the national home visiting models described in this paper.

In sum, benefits in children's cognitive development accrue more often among families where there are clearly identified needs to be addressed (e.g., children with physical disabilities and developmental delays). Benefits are not demonstrated reliably in randomized trials of home visiting programs, although there is a suggestion that home visiting services may help promote early language skills. Social development effects are elusive, although one program found significant long-term benefits in children's behavior.

C. Ready Schools

The First 5 California Children and Families Commission defines "ready schools" as those which, "secure a smooth transition between home and school," among other traits. With a few exceptions (e.g., HIPPY), most of the large, national home visiting programs usually end their services well before children enter kindergarten. But, home visiting programs can help ease the transition of children to school. For example, home visitors can communicate directly or urge parents to communicate directly with their children's public pre-kindergarten program or school regarding the children and their needs. They can make sure that children with special needs are identified early, and they can help parents understand the steps they can take to both ease their children's transition into school, and also to become involved in their children's education.

Most home visiting programs do not measure this aspect of their progress, but it seems sensible that programs administered by school districts would be more likely to be able to accomplish and encourage smooth transitions between home and school. With school-based programs, parents may begin to see the home visiting programs as an extension of the schools, which may personalize the institutions and make parents feel more welcome.

Many PAT, PCHP, and HIPPY programs are administered through school districts, and some have examined the resultant connections parents display with the schools. For example, a survey of parents who had participated in Missouri's statewide PAT program when their children were young reported high levels of involvement in their children's education and schooling in subsequent years. Fully 95% of surveyed parents attended special events at their schools, nearly 67% worked as volunteers in the school or classroom monthly, 75% participated in PTA and PTO meetings, 67% communicated with their children's teachers by phone an average of four times a year, and 65% of parents always assisted with home activities related to school work.[41] A small survey of HIPPY parents in Texas suggests similar effects.[42] Neither study can determine whether the parents were "joiners" who would have become involved in their children's schooling anyway, but the descriptive studies suggest that home visiting linked with schools may result in parents becoming more involved in their children's schools.

Home visiting programs that are linked with schools may result in parents becoming more involved in their children's schools.

V. Delivering Home Visits in Combination with Other Services

The previous section describes mixed results for most home visiting programs, with results most consistently observed in areas related to parenting, including child abuse and neglect, and less consistently observed in child development. These very mixed results are derived from studies of programs in which home visiting was the primary service

strategy. Would benefits be larger if home visiting were combined with other service strategies?

For child development and especially cognitive development outcomes, the answer appears to be "yes." Project CARE, a North Carolina research project, compared the development of home-visited children with (1) that of children who received a combination of home visits and center-based group care and (2) a control group. Results indicated that only the children receiving the group-based services and home visiting outperformed the control group.[43]

"Programs that combine child-focused educational activities with explicit attention to parent-child interaction patterns have the greatest impacts."

Some of the child-focused programs that produced the most substantial long-term outcomes for children combined center-based early education services for children with significant parent involvement through home visiting, joint parent-child activities, parent groups, or some other means.[44] In these programs, children demonstrated benefits in academic achievement throughout their school years, and were more productive citizens (less crime and delinquency, for example) as young adults. Similarly, the children in Early Head Start program sites where both home visits and center-based services were offered demonstrated larger and broader cognitive and language development benefits than children in sites which offered only center-based or only home visiting services, although no differences in children's behavior were observed.[7]

The National Academy of Sciences has concluded, "Programs that combine child-focused educational activities with explicit attention to parent-child interaction patterns and relationship building appear to have the greatest impacts. In contrast, services that are based on generic family support, often without a clear delineation of intervention strategies matched directly to measurable objectives, and that are funded by more modest budgets, appear to be less effective."[45] In other words, while parent involvement confers a unique advantage in early childhood programs, it is parent involvement that has been coupled with child-focused programs like a good quality child care or preschool program, that has helped produce the longest-lasting, broadest range, and largest magnitude changes in children.

VI. The Importance of Quality Services

Results of more than 25 years of research on home visiting programs demonstrate great variability across program models, across program goals, across sites, and across families. But, there is one consistent result across all studies: Every home visiting program struggles to deliver high quality services to families. Benefits for children and parents would be stronger and more consistent if program quality were enhanced. Indeed, the National Academy of Sciences concluded that the key to program effectiveness is "likely to be found in the quality of program implementation…"[46]

Benefits for children and parents would be stronger and more consistent if program quality were enhanced.

The following are the primary components of program quality:

- family engagement,
- the content and delivery of the curriculum,
- staffing, including the skills and abilities of home visitors to forge relationships with the families,
- cultural consonance between the program and its clientele, and
- developing appropriate responses to those high-risk families that are facing depression, substance abuse, or domestic violence.

Research suggests that typical home visiting programs struggle with all these aspects of quality, but that dedicated quality improvement efforts can lead to better services for families, and that those high-quality programs are more likely to produce benefits for children and families.

A. Family Engagement

All home visiting programs struggle to enroll, involve, and retain families in home visiting services and in the additional services they offer, such as parent group meetings. Of course, many other types of parent education and early childhood programs also report difficulties in engaging parents.[47] But, for an intervention such as home visiting, in which the total scheduled amount of contact between a family and home visitor might be as few as 12 hours per year, decreasing that contact can have a substantial effect. Programs can and should take action to address four aspects of engagement: enrollment, intensity of services, attrition, and activities undertaken by families between home visits.

1. Enrollment

Up to 40% of families that are invited to enroll in these programs choose not to participate,[9,12,39] with refusal rates highest for programs associated with research studies. In contrast, other non-research programs report much lower refusal rates: 2%[48] - 6%[49] in programs that offer a single home visit to all families with newborns, or all first-time or teen mothers in a community; and 8-12% in programs that seek to screen and then enroll high-risk mothers into services.[48,50] And, some programs which offer services to all families in a community have no problem with refusals and instead have waiting lists filled with families clamoring for services.[51]

2. Intensity of Services

Once enrolled, families in most programs receive about half the scheduled number of home visits, no matter the intended frequency of visits.[52] For example, through the first year of Hawaii Healthy Start, the forerunner of HFA, in which families were intended to receive visits every week, families that were still enrolled at the end of the year had received just 22 visits (42%).[9] In three evaluations of PAT programs, families averaged 38%, 56%, and 78% of the expected number of monthly visits.[22,51] In the Nurse-Family Partnership, where visits vary in frequency beginning with weekly visits and then reducing to quarterly, families received averages of 32 (53%) and 33 (55%) visits at two

program sites, rather than the initially scheduled 60 visits.[12] In Early Head Start, none of the 10 programs that planned weekly visits were able to achieve them consistently; sites were typically able to complete at most about two visits per month.[53] The Teenage Parent Home Visitor Services Demonstration Evaluation Project averaged only 38% of its scheduled visits by paraprofessionals to teenage mothers on welfare, even though missed visits were supposed to result in financial sanctions.[32] An exception to this general pattern may be the PCHP where program administrators report a 90% completion rate for its twice-weekly home visits.[54] If this is accurate, it may be because the PCHP brings toys and books into the homes of participants, and participants may be more likely to welcome visits in order to receive those tangible gifts.

Families receive about half the scheduled number of home visits…. Typical attrition rates hover at about 50 percent.

Generally, however, missed visits are common, and they may reflect factors as mundane as bad weather that makes it impossible for home visitors to travel, or family issues (e.g., disinterest, the chaotic nature of some families' lives, or their inability to juggle time commitments between home visiting, work, and family). In Early Head Start, home visitors tried to schedule evening visits to reach working families, but many parents were too tired at the end of a long day to have a home visit.[55] No matter the cause, once an appointment is missed, home visitors with tight caseloads may find they are unable to reschedule visits until the next regular appointment time rolls around again, with the consequence that families receive less intensive services than planned.

Although no studies have been conducted to demonstrate the minimum number of home visits necessary to create change, it seems intuitively reasonable that some threshold number of visits must be completed before change can occur, and that too few visits will hamper the formation of the relationship between home visitor and parent and result in spotty coverage of the program's curriculum. Studies of PAT and NFP suggest that families that receive more contacts benefit more.[56] A precise minimum threshold is unknown, but researchers have speculated variously that four visits,[16] three to six months of services,[1] or more than 6 months and 12 home visits[57] may be required before change can occur. For programs in which the intended service intensity is fairly low (e.g., monthly), this may be a particular problem because it may mean that the threshold minimum number of visits is never crossed. Indeed, some PAT evaluators have concluded that, "The typical "dosage" of home visits is probably insufficient to result in sizable benefits to children."[58]

3. Attrition

Studies of home visiting programs suggest that between 20% and 80% of enrolled families disengage from the programs before services are scheduled to end, with typical attrition rates hovering at about 50%. (See Table 2 for examples of attrition from some recent studies.) The reasons for leaving usually include moving out of the community and returning to work, as well as disinterest, so some of this attrition is clearly outside the control of the home visiting programs.

In other cases, however, the design of the home visiting program or the decisions of the program staff affect attrition. For example, a study of HIPPY suggested that the program's design of operating only during the academic year may have increased attrition because some families lost interest during the summer months.[37] A study of Hawaii's Healthy Start program revealed that programs operated by three administering agencies had dramatically different attrition rates ranging from 38% to 64% over one year, which reflected differences in their policies toward holding onto hard-to-reach families. The Hawaiian agencies responded by analyzing their enrollment and retention rates and developing new performance guidelines regarding time from assessment to first home visit, home visit frequency, and program attrition.[59]

Home visiting programs that have high attrition rates should make sure that they are offering services that their customers want.

The consistency of the attrition findings, observed in home visiting studies for years,[60,61] suggests that the findings cannot be dismissed out-of-hand as the products of poorly implemented programs. The client engagement and attrition rates in home visiting programs are analogous to consumer decisions to purchase services in other businesses. Home visiting programs that have high attrition rates, like any business, should make sure that they are offering services that their customers want. As the National Academy of Sciences concludes, "…the failure of families to continue to participate in an early childhood program may indicate the need to reevaluate the goals of the intervention, the nature of the services that are provided, and the goodness-of-fit between what the program offers and what the target families perceive as their needs."[62] Changing employment patterns, driven by welfare reform, is a special problem, and the NAS further recommends that a "significant restructuring of program practices" may be in order to suit parents' work schedules as more low-income families are required to enter the workforce.[63] Some home visiting programs such as HIPPY have adapted and now offer "home visits" with parents at their workplace, or at child care centers when parents pick up their children at the end of the day. (See Appendix C-3 for a description of HIPPY.)

4. Activities Undertaken by Families

Evaluators of PAT suggest that three other kinds of engagement are important to the success of home visiting: parents must "be involved" and interested during the home visit itself, they must "do the homework" between home visits, and then, ideally, they should also "look for more" activities between visits, such as attending parent group meetings.[51]

In their study of three inner city PAT programs, the researchers found that the parents whom home visitors rated as less involved during their home visits tended to drop out of the program, that many families did not do the homework between visits, and that only about 1/3 of the families attended a parenting group over the course of a year.[51]

Other reports reinforce this finding. In one study, many HIPPY parents did not work with their children the intended 15-20 minutes each day, perhaps accounting for the varying outcomes across families and sites.[37] Although 11 of 13 Early Head Start

Table 2.
Attrition Rates: Percentage of Families No Longer Enrolled by Month, As Reported in Recent Evaluations of Home Visiting Programs

# Months	Oregon HFA[50]	San Diego HFA[23]	HA Healthy Start[59]	Sacramento ABC/Cal-SAHF[69]	NFP: Denver nurses[5]	NFP: Denver paraprofessionals[6]	NFP: Site A[7]	NFP: Site B[7]	NFP: Site C[7]	NFP: Site X[7]	NFP:n Site Y[7]	Salinas PAT[8]	Teen PAT[8]	Urban PAT[8]
1				5										
2				12										
3			10	21										
4														
5														
6	40		30	35										
7														
8														
9			44	42										
10														
11														
12			51	44										
13														
14														
15														
16														
17														
18				46										
19														
20														
21														
22														
23														
24			70		38	48	23	37	43	59	73		57	56
25														
26														
27														
28														
29														
30														
31														
32														
33														
34														
35														
36		40	79									43		

program sites providing home-based services also offered regular group socialization activities, only two programs achieved regular participation by at least half of the families.[55]

In sum, when behavior change in children is predicated upon behavior change in parents but parents' behavior does not shift, then benefits for children will be much harder to achieve.

B. Staffing

Home visiting programs rely upon staff to forge relationships with families and to convey the program's content to them. Hiring, training, and retaining the right people is imperative, and many programs struggle with high levels of turnover, which can undermine the connections parents feel with programs. (See Appendix E (FAQ5): Whom Should We Hire as Home Visitors?)

1. The Home Visitor

The home visitor's role is critical. From the point of view of families, home visitors *are* the program. They draw families to the program, and they deliver the curriculum. Home visitors must have the personal skills to establish rapport with families, the organizational skills to deliver the home visiting curriculum while still responding to family crises that may arise, the problem-solving skills to be able to address issues that families present in the moment when they are presented, and the cognitive skills to do the paperwork that is required. These are not minimal skills, and there is no substitute for them if programs are to be successful.

Hiring, training, and retaining the right people is imperative.

The debate about home visitors has usually been framed as a debate about professional versus paraprofessional workers, or about visitors from one profession such as nursing versus another.[12,64] Such debate has important implications for program operations because labor accounts for most of program costs, and home visitor backgrounds and training drive labor costs.[65] With just a few exceptions, however, research provides no direct comparison of the effectiveness of professional versus paraprofessional visitors, or one type of professional versus another.

One exception is a recent study of the NFP in Denver, Colorado, which directly compared the effectiveness of nurse and paraprofessional home visitors.[39] Results indicated that paraprofessionals produced benefits about half the magnitude of those produced by nurses – a magnitude that was not large enough to differ significantly from the control group for any outcome, while nurse-visited families did benefit more than control group families in some areas (e.g., deferral of second pregnancies, maternal employment in the second year of the child's life, and mother-infant interaction).[66] (See Appendix B for more details on this study.)

Some argue that nurses provide special benefits: their association with the health care system helps remove stigma that families might otherwise feel if they believe that they are in a program to improve their parenting or to prevent child abuse; pregnant women and new mothers may be more receptive to the health-related information that nurses can provide because the mothers are experiencing so many physical and health changes; and the training that nurses receive may equip them to make sure that they reinforce program protocols, even if other events intervene to pull them away.

Extremely well-trained visitors are needed to serve families who are facing multiple, complex issues

Most researchers believe it is not possible at this time to conclude that individuals from a particular professional or educational discipline are better home visitors than others,[64,67] but many of the most recent studies of programs that employed paraprofessionals produced either no or only very modest results.[23,32,39] Case reviews in a study of an HFA-type home visiting program in San Diego suggested that paraprofessional home visitors did not recognize and/or did not follow-up appropriately with families with mental health, substance abuse, and domestic violence problems.[23] It seems likely that extremely well-trained visitors are needed to serve families who are facing multiple, complex issues.[67]

This means that the workers will need something beyond a high school diploma if they are to work with high-risk families, and, ideally, will have some experience or training in early childhood or the helping professions. One study of paraprofessional and nurse home visitors suggested that paraprofessionals could produce outcomes approximately equivalent to the outcomes produced by nurses, so long as the paraprofessionals participated in an intensive, 6-month training program before beginning to serve families.[68] Most home visiting programs do not offer training of this length.

2. Turnover

Because the connection between home visitor and family is the route through which change is hypothesized to occur, turnover among home visitors can be a serious problem. In the NFP in Memphis, for example, turnover among nurses was 50%, and the evaluators suggest that this may be at least part of the reason that results were more limited in Memphis than in Elmira.[12]

Turnover may be a special problem in programs using paraprofessionals. The San Diego HFA program reported 70% turnover over 3 years among its paraprofessional home visitors,[23] and Sacramento's Birth and Beyond Cal-SAHF program reported 73% turnover over 18 months.[69] (See Appendices B and C, respectively, for descriptions of these programs.) For many paraprofessionals, home visiting may be their first job, and they may not have the work-skills to keep it. Other paraprofessionals may successfully use the experience they gain as a home visitor to advance their careers and move to another job, especially in regions with booming local economies. A survey of home visiting programs in San Mateo County confirms that turnover is especially an issue

among paraprofessional home visitors,[70] and there is some evidence from the Early Head Start program evaluation that low wages, averaging $9.77 per hour in that program, contribute to staff unhappiness.[53]

If turnover is higher among paraprofessionals than professionals, then hiring paraprofessionals for the up-front salary savings they appear to provide may be short-sighted. By the time hiring and training costs for replacements are factored in, paraprofessionals may be about equivalent in cost as professionals. And, if staff turnover weakens rapport with families, then the extra turnover may result in weaker program outcomes, too.

A survey of home visiting programs in San Mateo County confirms that turnover is especially an issue among paraprofessional home visitors

3. Supervision

No matter their skill level or professional status, home visitors need close supervision. A good supervisor can help home visitors deal with the emotional stresses of the job, maintain objectivity, prevent drift from program protocols, provide an opportunity for reflection and professional growth, and model the relationship that the home visitor should establish with the parent.[64] Home visiting can be a lonely job, and visitors in small programs may work largely on their own, sometimes without anyone to turn to when problems arise. The best programs build in enough time for the supervisor to meet regularly with the home visitors and to accompany them on occasional visits to families.

C. Curriculum

Home visitors rely on the program's curriculum to help them change families. The curriculum must be geared to the program's goals, and the content must be delivered as intended, or the program's effectiveness will be limited. (See Appendix E (FAQ1): Which Home Visiting Model Should Be Selected?)

1. Curriculum Content

It may seem an obvious point, but the curriculum for a home visiting program should be crafted so that it addresses the program's goals. The curriculum should address explicitly how families can alter the risk factors, barriers, or behaviors that must be changed if the program's goals are to be achieved. For example, national estimates suggest that low birth weight rates could be cut by 20% if smoking during pregnancy were eliminated.[17] Programs that seek to improve birth outcomes should therefore make sure that their curricula include the latest information about how to help pregnant women stop smoking. Programs that seek to help women leave welfare and enter the workforce should include a focus on helping mothers defer subsequent pregnancies. Programs that seek to prevent child abuse and neglect should address the presence of domestic violence in the home.

It may be difficult to identify the linchpin behaviors that must be changed before each goal can be achieved, and some goals may need to be addressed via multiple routes. But, if programs can focus on removing the barriers, then success will be much more likely.

2. Curriculum Delivery

The curriculum must be geared to the program's goals, and the content must be delivered as intended.

Once the curriculum is in place, home visitors must deliver it. Unfortunately, research suggests that may not always occur. Videotapes of several home visits in the Salinas Valley PAT program indicate that some home visitors were staying only 20-45 minutes, rather than the intended 50-60 minutes, suggesting that the content of the visits probably differed across visitors.[22] A study of the NFP in Denver employed both nurses and paraprofessional home visitors and discovered that, in general, nurses spent more time on physical health during pregnancy and on parenting after delivery than did paraprofessionals, while paraprofessionals spent more time on pregnancy planning, education, work, and family material needs, even though both were trained to deliver the same curriculum.[71] Early Head Start evaluators reported that, "…some programs reported facing challenges in trying to complete planned child development activities during home visits, because parents placed greater emphasis on family development needs."[72](See Appendix B for more details about these studies.)

Of course, some deviations from the model are expected and may even be encouraged as home visitors individualize services to meet families' needs. Home visitors *should* set aside the day's curriculum to help a mother deal with the immediate crisis caused by an abusive spouse, an impending eviction, or the loss of a job.

Nevertheless, if programs are consistently unable to deliver the content, program effectiveness will be limited. Home visiting programs only achieve those goals on which they focus. When the Teenage Parent Demonstration Program provided extra training and encouragement for its home visitors to address contraception, rates of contraceptive use began to rise.[32] When San Diego's Healthy Families America program increased training and focus on the use of health care services, the use of those services increased.[23]

Home visitors spend only limited time with their families, and the more focused they and their messages can be, the more likely that progress will be made. Programs should therefore monitor this aspect of program implementation.

D. Cultural Consonance

Parenting practices are strongly bound by culture. Parents of different cultures possess strongly held beliefs about the best approaches to handling sleeping, crying, breastfeeding,[47] discipline,[67] early literacy skills,[73] and obedience and autonomy in children.[67] Further, it appears that the same parenting practices can yield different results for children from different cultures. For example, one recent review suggests that

although an authori*tative* parenting style may be associated with positive outcomes for white children, a more authori*tarian* style may be associated with more positive outcomes for African Americans and Asian Americans.[67]

This suggests that the advice that home visitors give to families will not always be consonant with the family's beliefs about parenting. Some parents of color who participated in PAT, for example, characterized some home visitor advice related to the avoidance of physical punishment (African-American and Latino families) and the promotion of children's autonomy (Latino families) as "white people stuff" and ignored it. White working class families also sometimes questioned home visitors' advice regarding parenting practices, including reading daily to infants.[51]

These different beliefs may be especially important in families in which mothers live with their mothers or extended family, because even if the mother in those families is persuaded that she ought to change an aspect of her behavior, she must also persuade the rest of the family. Such change can cause strife within the family,[47] and, therefore, some interventions seek to involve grandparents, fathers, or other family members.[30,74] Early Head Start programs, for example, employ a variety of strategies to engage fathers.

Although culturally-bound parenting beliefs may influence program outcomes, the differences are not consistent across program models or across program goals. For example, in the PAT Salinas Valley project, children of Latina mothers benefited more than other groups on child development outcomes.[22] In Early Head Start, however, African-American children benefited most, with very few benefits for Hispanics when children were 2 years of age, [75] although both groups benefited more than white families by the time children were 3 years of age.[76] In San Diego's HFA program, white but not African-American or Hispanic women deferred second pregnancies.[23]

The National Academy of Sciences concludes that "…parenting interventions that respond to cultural differences in a dismissive or pejorative manner are likely to precipitate significant conflict or be rejected as unacceptable."[77] This may contribute to high attrition rates.

"…parenting interventions that respond to cultural differences in a dismissive or pejorative manner are likely to precipitate…conflict or be rejected…"

The issue of cultural consonance is especially important in multicultural California. All the large home visiting program models have been employed to serve families from many cultures. The California programs profiled in Appendix C, for example, serve white, African-American, Hispanic, Asian American, and Native American families, and immigrants from many nations. Nevertheless, research has yet to catch up with the diversity that is part of the fabric of life in the state, and, while there have been several studies of home visiting with white, African-American, and, to a lesser extent Hispanic, families, there have been far fewer with Asian-Americans or other groups.

Despite the sparse research, programs should institute some minimum standards: While ethnic and racial matching of home visitors to families may not be necessary,[64] home visitors should speak the language of the families they are visiting and should understand their culture, and, especially, their beliefs about parenting, health practices, and the roles of women. To the extent possible, home visitors should involve members of the extended families of the mothers they visit.

Because families may withdraw when they hear advice with which they disagree, home visitors may be tempted to refrain from broaching those touchy topics where they know that the program may recommend an approach other than the one embraced by the culture of the families they are visiting. While steering clear of controversy may keep families in the program longer, tenure in a program by itself will not lead to benefits for parents or their children. The key is to keep a focus on the specific goals of the program, and to make sure that home visitors find ways to return to that advice, relying upon their relationship with the families to help persuade parents to change their behavior.

E. Serving High-Risk Families

As home visiting programs extend their outreach to families at higher levels of risk, they face increasing challenges in developing curricula that can address the needs of those families. For example, HFA uses a screening tool to select higher-need families; the NFP only enrolls low-income, first-time pregnant women; and programs drawing their clientele from TANF rolls may find that more and more women have higher levels of need as most others have already entered the workforce. For most programs, therefore, quality services require having curricula and staff in place to serve a high-risk population.

Up to 50% of families in some home visiting programs have symptoms of clinical depression.

Three issues deserve particular mention: (1) domestic violence in families; (2) maternal mental health problems, especially depression; and (3) substance abuse. Results from many home visiting programs suggest that these issues are among the hardest for home visitors to recognize or to address effectively, and, along with contraception, are the issues that they feel least comfortable discussing.[23,69,78] But, these are precisely the issues that are most likely to stymie progress for parents and to harm their children.

For example, about 20% of the general population, as many as 30-40% of the welfare population,[29] and up to 50% of families in some home visiting programs have symptoms of clinical depression.[23,69,78] All the women enrolled in the HFA program in Lancaster, California had mental health issues upon initial screening.(See Appendix C-2.) Fully 16% of the caseload in an HFA program in Oregon experienced domestic violence just within the first 6 months after enrollment,[50] and 48% of the families experienced domestic violence in the Elmira, New York site of the NFP over a period of 15 years.[21] In the Oregon HFA program, families that experienced domestic violence within the first 6 months of their children's lives were three times more likely to have physical child abuse

confirmed than families without domestic violence during that six-month window.[50] Home visiting services must be modified to respond to domestic violence and these other issues. These are sentinel events that have substantial impact on children over the long run.

F. The Malleability of Quality

There is heartening evidence that program quality can be monitored, shaped, and improved. For example, the experience of Hawaii's Healthy Start program indicates that program sites can and do have some degree of control over attrition rates. A quick feedback loop in which data on program performance is fed back to program managers is one mechanism by which these variations can begin to be understood and controlled. The Sacramento County Birth and Beyond program has also used data in this way. (See Appendix C-7 for a description of this program.)

When quality improves, outcomes for children improve, too. Early Head Start sites that had early, full implementation of the program's performance standards generated greater benefits in children's development than did sites which had not yet met the standards.[79] In Hawaii's Healthy Start program, program sites that delivered services with the greatest fidelity to the model had the greatest effect on mothers' mental health.[78]

VII. CONCLUSIONS

Home visiting services can produce the results that prepare children for school, but they do not always do so in practice. And, benefits are often small. When averaged across program models, sites, and families, results for most outcomes are about .1 or .2 of a standard deviation in size, an effect size that is considered small in human services. Effects are most consistent for outcomes related to parenting, including the prevention of child abuse and neglect (depending upon how child maltreatment is measured). Home visiting programs do not generate consistent benefits in child development or in improving the course of mothers' lives. Families in which children have obvious risk factors (e.g., they are biologically at-risk, developmentally delayed, or they already have behavior problems) appear to benefit most. Some studies also suggest that the highest-risk mothers (e.g., low income teen mothers; mothers with poor coping skills, low IQs, and mental health problems) may benefit most.

For every outcome, as many as half of the studies and programs demonstrate extremely small or no benefits at all. But, for every outcome, a few programs or program sites demonstrate larger benefits, and it is those more positive results which have driven the expansion of home visiting programs and which illustrate the *potential* of home visiting.

The mixed and modest results, however, illustrate just how fragile an intervention home visiting can be. The most intensive national models are slated to bring about 100 hours of intervention into the lives of families. More typically, programs deliver perhaps

20 or 40 hours of intervention over the course of a few years. That is not much time in which to address issues as complex as child abuse and neglect, school readiness, and deferral of second pregnancies. But, that is the task that has been set for home visiting programs. It is therefore important for policymakers and practitioners to keep their expectations modest about what can be accomplished through any single intervention.

Nevertheless, high quality home visiting programs can play a part in helping prepare children for school and for life. Together with other services such as center-based early childhood education, joint parent-child activities, and parent groups, home visiting can produce meaningful benefits for children and families. For that reason, home visiting services should be embedded in a system that employs multiple service strategies, focused both on parents and children.

Even in such a system, the key to effectiveness is quality of services. Only the best home visiting programs have a chance to benefit children and parents, and funders and program administrators must strive to make each funded home visiting program a strong, high quality program.

To be effective, programs must focus on the goals that they seek to accomplish and make sure that their curricula match those goals, that their staffs are in sync with the goals, and that the families they serve receive information and assistance related to those goals. Programs must seek to enroll, engage, and retain families with services delivered at an intensity level that is as close to the standards for their program model as possible. They should hire the best, most qualified staff they can, and pay them wages that will encourage them to stay. They should seek the counsel of their clients to make sure that they are offering services that their customers want and need. The good news is that quality is malleable, and that programs that set performance standards, monitor their progress toward achieving them, and make corrections along the way are much more likely to produce benefits.

Finally, funders and administrators should consider home visiting services from the point of view of parents and children. To that end, home visiting services should be coordinated within each community so that families receive referrals to the home visiting program that best meets their needs, home visiting programs share training and resources, and families are not faced with multiple visitors.

Home visiting services have the potential to build school readiness for children. They are best delivered as one of a range of community services offered to families with young children. They are not a silver bullet for all that ails families and children, but then no single program or services strategy can be. When done well, home visiting services recognize and honor the special role that parents play in shaping the lives of their children, and they can help create ready families and communities, ready children, and ready schools.

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